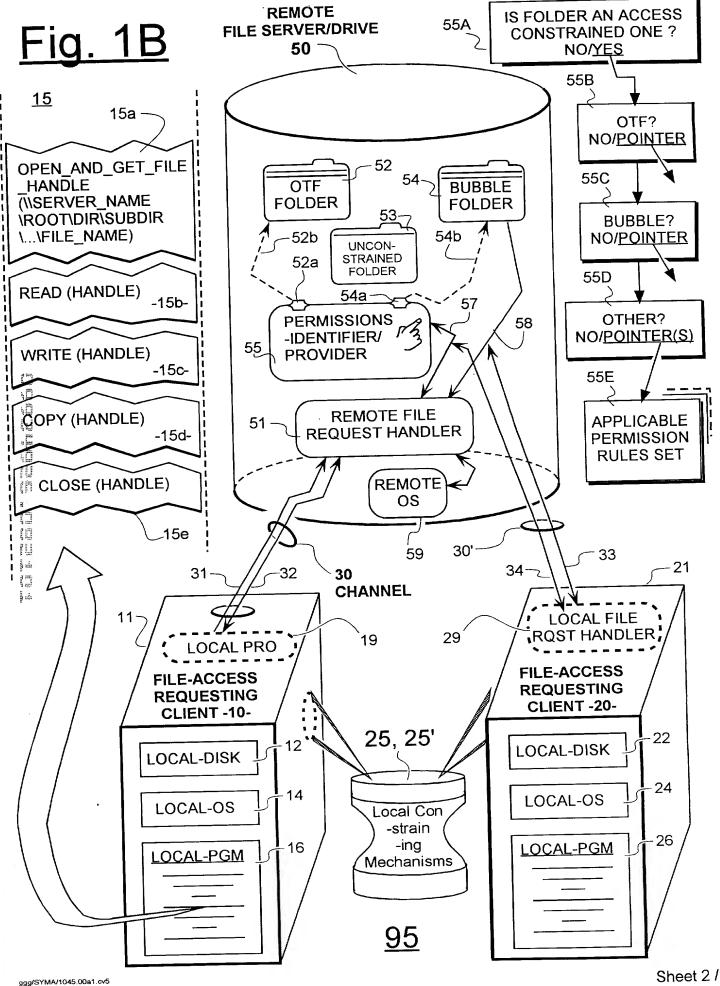


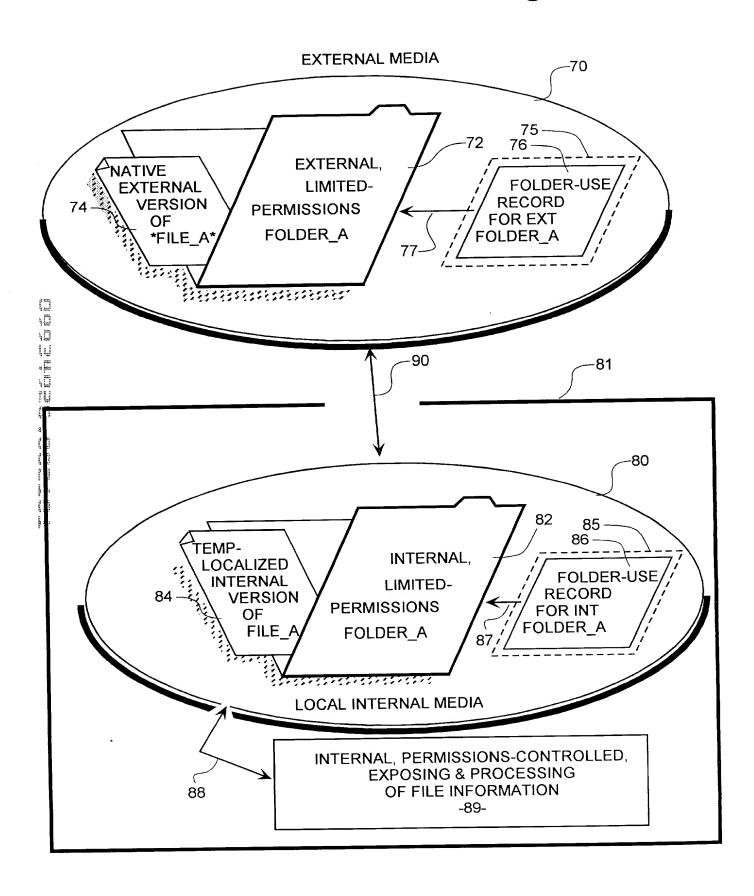
ver 3/24/2000 12:30am

Sheet 1 /



ggg/SYMA/1045.00a1.cv5 Tile 2 ver 4/04/2000 12:30pm

## Fig. 1C

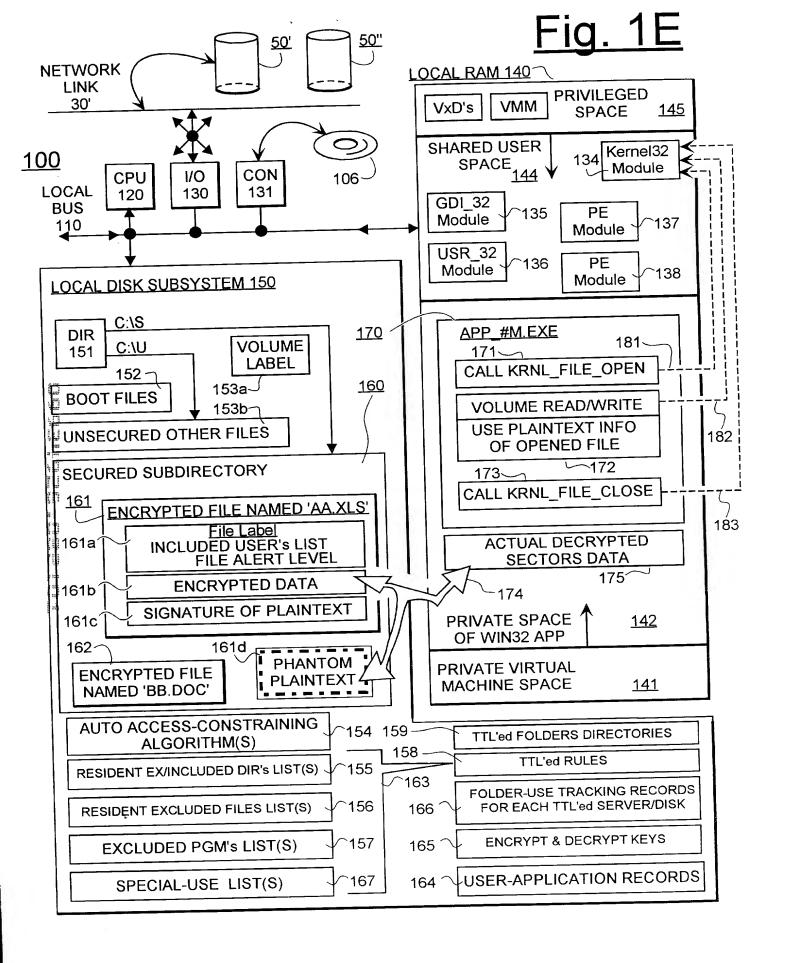


# Fig. 1D

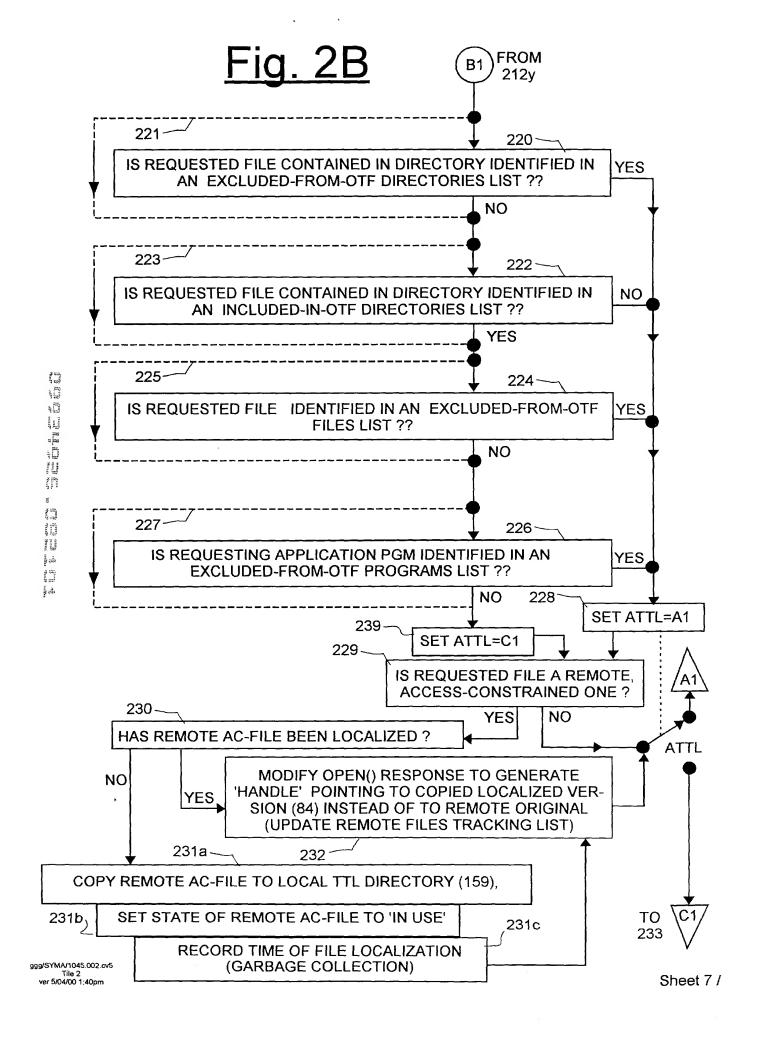
<u>60</u>

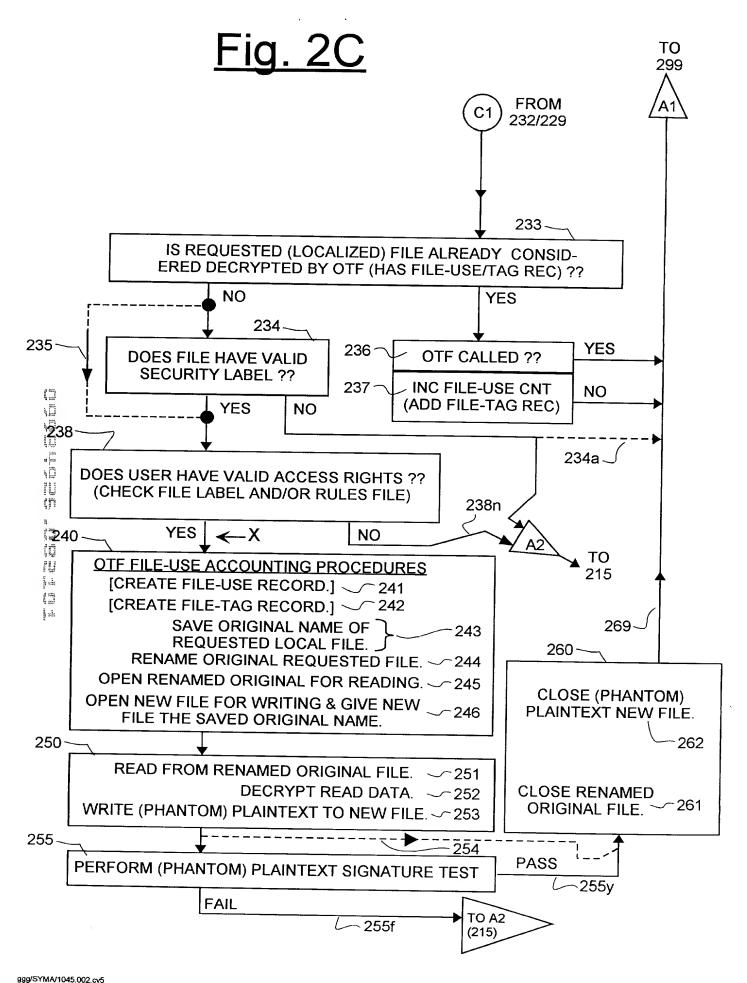
#### FOLDER-USE RECORD

61 ~	FULL PATHNAME OF LOCAL VERSION OF ACCESS-CONSTRAINED FOLDER (\\LMACHINE\VOLUME\DIR\\SUBDIR) 61a			
	→ NATIVE? ☐ TEMPORARILY-LOCALIZED AND EXTERNAL ON-LINE?			
61d \	FULL PATHNAME OF EXTERNAL, SOURCING ACCESS-CONSTRAINED FOLDER (\\SERVER\VOLUME\DIR\\\\SUBDIR\)  MIRROR(S)			
<u>62</u> ~	TYPES OF ACCESS-CONSTRAINT APPLYING TO THIS FOLDER (AT LEAST ONE IS CHECKED)  ON-THE-FLY RECRYPTION (OTF)  BI-DIRECTIONAL BUBBLE PROTECTION  OTHER			
63	OTF CONTROL LIST(S)			
Harte stages was given by general from the first the form that find the stage of the first that find the first that first the first tha	66 EXCLUDED FILES LIST			
	67 EXCLUDED PROGRAMS LIST			
	68 OTHER CONTROL INFO FOR THIS OTF-COVERED FOLDER			
65	BUBBLE CONTROL LIST(S)			
<u>55</u>	96 FILES APPROVAL SPECIFICATIONS			
	97 PROGRAMS APPROVAL SPECIFICATIONS			
	98 OTHER CONTROL INFO FOR THIS BUBBLE-COVERED FOLDER			
<u>93</u> $\sim$	QTHER PERMISSION CONTROL LIST(S)			
<u>69</u> ^	AUTHORIZED USERS CONTROL LIST(S) FOR THIS ACCESS-CONSTRAINED FOLDER			
99 ^	DIGITAL SIGNATURE FOR NATIVE VERSION OF THIS FOLDER-USE RECORD			



ver 5/04/00 1:30pm





300 FILE-USE RECORD

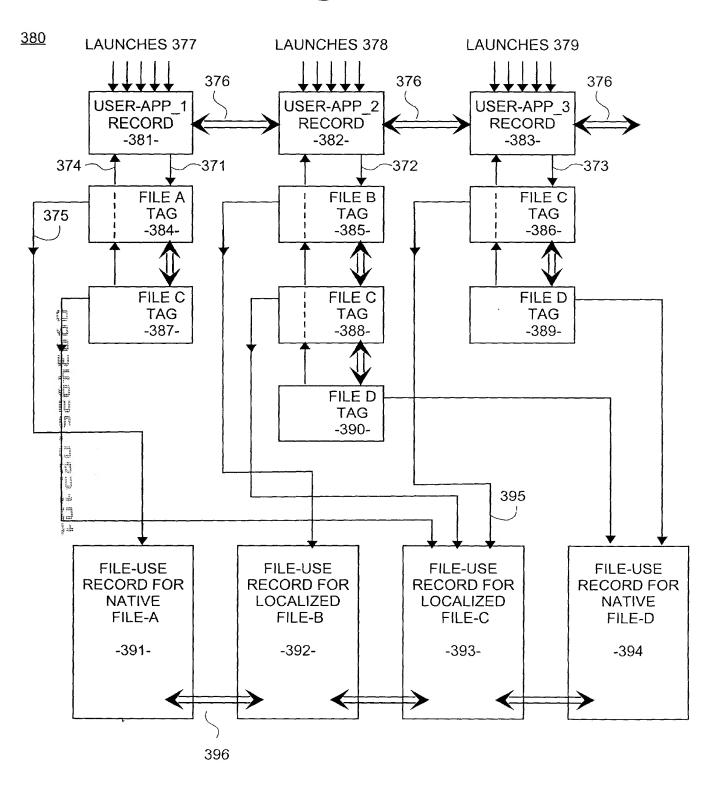
# Fig. 3A

310	OR	RIGINAL PATHNAME OF LOCAL VERSION OF OTF-COVERED FILE
<u>320</u> ^	CU	RRENT STATE OF THE LOCAL FILE
	321 ~	BEING PROCESSED BY LOCAL OTF?
		☐ RENAME STILL IN PROGRESS ☐ DECRYPT STILL IN PROGRESS
		☐ RE-ENCRYPT STILL IN PROGRESS ☐ SCORCH OF PLAINTEXT STILL IN PROGRESS
		☐ UPDATE OF DIR ATTRIBUTES STILL IN PROGRESS
		OTF HANDLING COMPLETE
	(322)	☐ FILE LABEL PRESENT & VALID☐ ACCESS RIGHTS HAVE BEEN CHECKED☐
		RULES FILE MATCHES FILE LABEL
	323	PLAINTEXT MODIFIED BY USER ?
330	USA	GE TRACKING
	331	USE-COUNT: (IN-USE BY 1+ LOCAL APP PROGRAMS?)
Hans. Hans Hans the State Stat	(332)	POINTER TO BIDIRECTIONALLY LINKED LIST OF PATHNAMES OF APPLICATIONS (LOCAL) STILL 'USING' THE PLAINTEXT FILE AND 'IDLE TIME' OF EACH SUCH APP
Garage strang of the Strang of	(333)	IDLE TIME LOCKOUT ACTIVE ?
ereit	(334)	DELAY OF POST-CLOSE DECRYPTION REQUESTED BY LOCAL APPLICATION?
	(335)	POINTER TO BIDIRECTIONALLY LINKED LIST OF POST-CLOSE EVENTS TO WAIT FOR
<u>340</u> $\smallfrown$	ORIG	GIN TRACKING
	341	NEW NAME OF RENAMED & (NATIVE OR LOCALIZED) FILE
	342	ORIGINAL REMOTE PATHNAME OF LOCALIZED FILE
	343 `.	TYPE OF MEDIA ON WHICH RENAMED & (NATIVE OR LOCALIZED) FILE ORIGINALLY SAT ON
		<ul><li>□ NATIVE VS. REMOTE</li><li>□ FIXED VS. REMOVABLE</li><li>□ RW VS. READ-ONLY</li><li>□ IN VS. REMOVED</li></ul>
	344	STATUS OF CHANNEL TO MEDIA ON WHICH RENAMED & LOCAL-IZED FILE ORIGINALLY SAT ON
		☐ TRUSTED VS. UNTRUSTED ☐ UP VS. DOWN
1		

# Fig. 3B

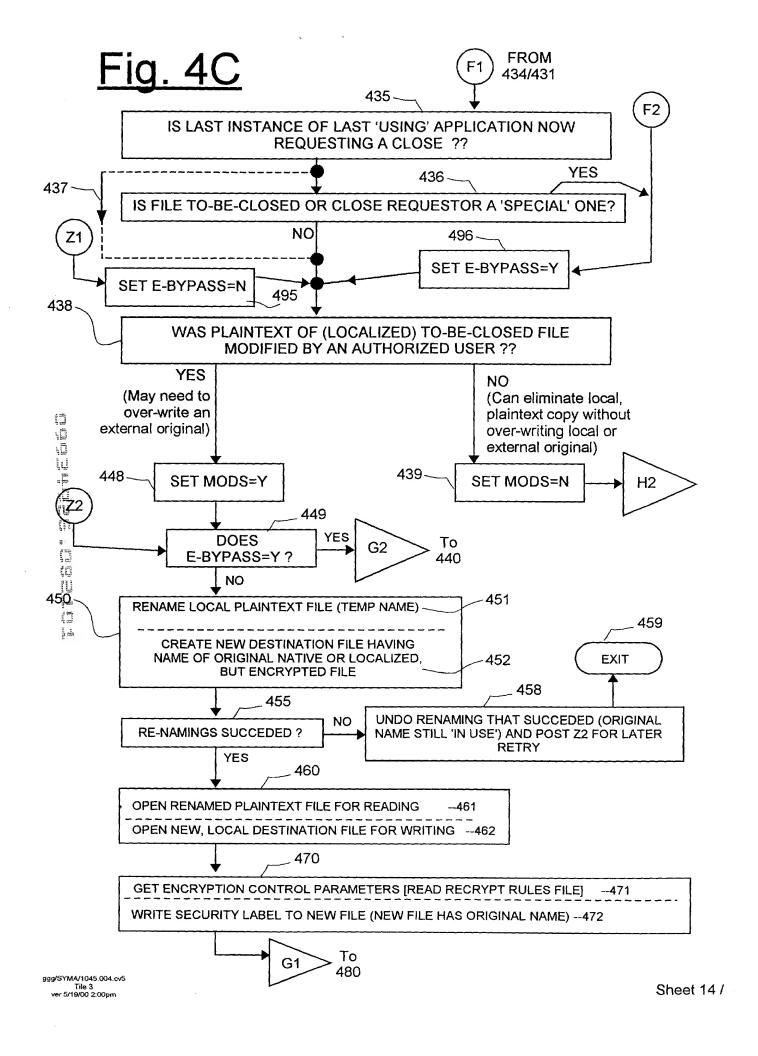
<u>30</u>	<u>)0</u>	FILE-USE RECORD (CONTINUED)
<u>340</u> ^	(345) ^	OTHER ATTRIBUTES OF RENAMED & (NATIVE OR LOCALIZED) FILE  Time of Localization  Time of Localization
<u>350</u> へ	GL	DBAL SYSTEM TRACKING
	351~	☐ VxD ID NUMBER FOR THIS RECORD
2 - 2 - 10 - 10 - 10 - 10 - 10 - 10 - 10	(352) ^	POINTERS TO NEXT/PREVIOUS FILE-USE RECORD
and are at given at a face and the face of	(353) ^	POINTERS TO CORRESPONDING, EXTERNAL FILE-USE RECORDS
the transport of the tr		
See Agent and See See See See See See See See See Se		<u>Fig. 3C</u>
		USER-APPLICATION RECORD
<u>360</u> $ ilde{}$	_	
	361∕	PATHNAME OF THIS FILE-USING LOCAL APPLICATION PGM
	362 🦳	COUNT OF NUMBER OF TIMES THIS FILE-USING APPLICATION HAS BEEN LAUNCHED
	363 <u> </u>	POINTER TO BIDIRECTIONALLY LINKED LIST OF FILE TAGS OF FILES THAT HAVE BEEN 'OPENED' BY ACTION OF THIS APPLICATION PGM
	364~	POINTERS TO NEXT/PREVIOUS USER-APP RECORD
	L	

## Fig. 3D

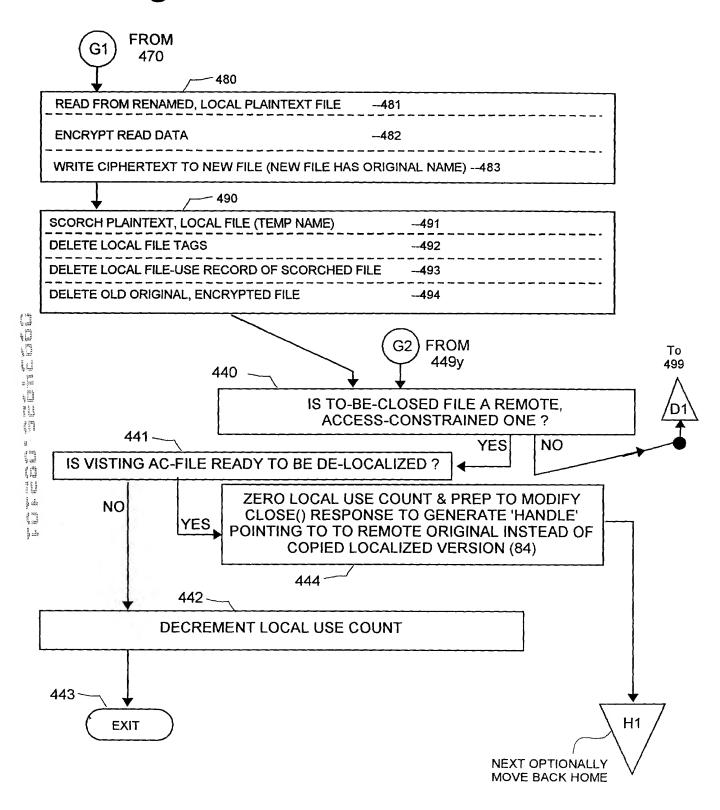


400 Fig. 4A 401 ~ 499 ~ ENTER ON INTERCEPT OF CLOSE-FILE **EXIT INTERCEPT** REQUEST SENT TO OS KERNEL DUE TO & CONTINUE WITH (SUB)ACTIVITY OF LAUNCHED APPLICATION NORMAL F-CLOSE **PGM OR OS COMPONENT** 402y 202 **UPDATE** IS **EXIT** 404 FOLDER-USE REQSTED WITH Yes No IS **RECORDS MEDIA AVAI** SERVER/ N **FOR** AN ACCESS -LABLE MEDIA No UNAVAILBLE Yes CONSTRAINING 403 **ERROR** SERVER/ **OPERATION** MEDIA **ACTIVE?** 404n 404v 498 405~ IS CONSTRAINTS TRACKING INFORMATION FOR IFOLDER OF] REQUESTED FILE LOCALLY AVAILABLE ?? Yes No 1 12 Ę Į Tana da **UNAVAIL-**406n-10 ABLE **-407** IS 10 TRACKING No M 413 ~ INFO NECES-1 PE2 SARY? 407n 4 mil 412 ~ 1 Yes IS CLOSE-FILE REQUEST FOR FINISHING 407y ACCESS TO THIS FILE APPROVED BY THE BUBBLE-BASED, PROGRAMto D2 APPROVING/DENYING ALGORITHM ?? Yes No 412y 417 **REFUSE THE** 418 CLOSE REQUEST to E1 WITH A FAILED REQUEST **POST LEVELED** SECURITY ALERT **SIGNAL** 415 419 **EXIT** from D2 407, 438n, etc. ggg/SYMA/1045.004.cv5

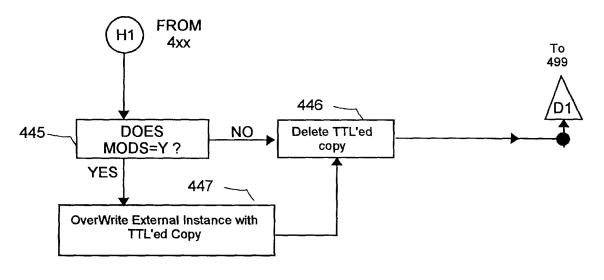
Tile 1 ver 5/17/00 2:50pm

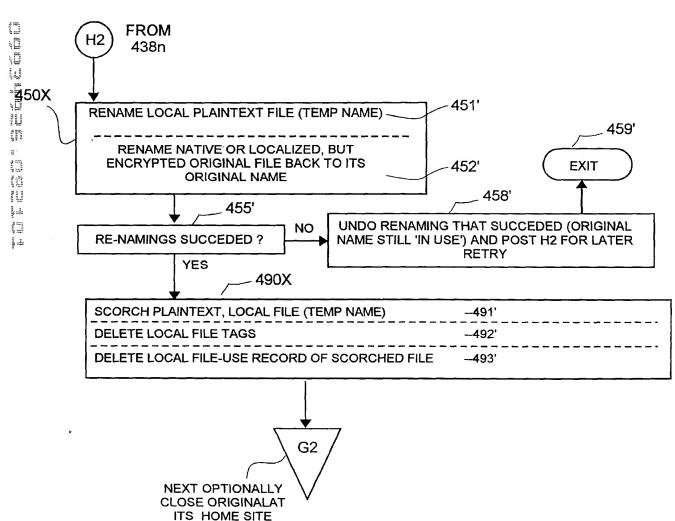


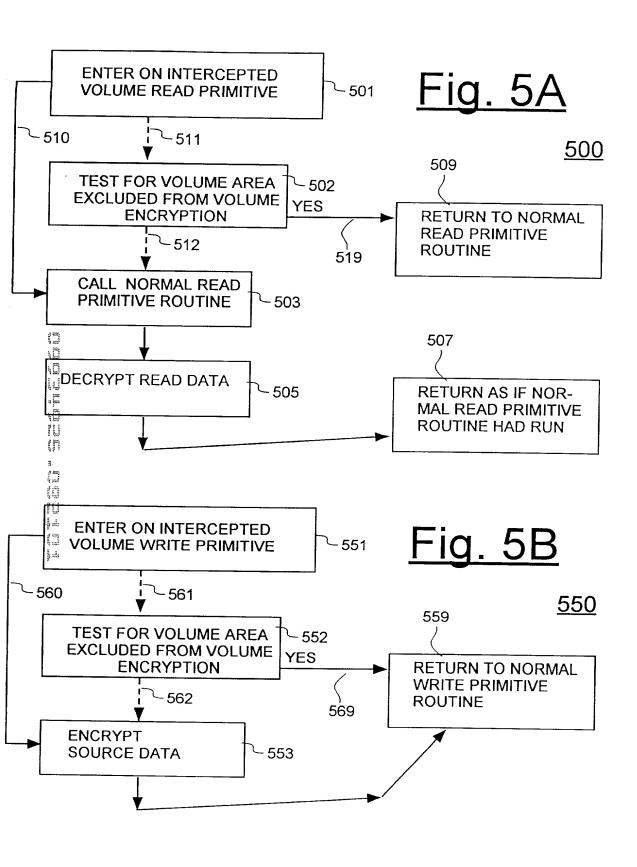
## Fig. 4D



## Fig. 4E







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M

#### 6A

#### 700 FIGURE 7A MULTI-THREADED FLOWCHART FOR RECRYPTION PROCESS THREAD-3 THREAD-2 THREAD-I DECRYPTING **EVENTS INTERFACE AGENT** INTERCEPTING CONTROLLING VxDVxD ~730~ ~720~ ~710~ ON INTERCEPT OF SEND MESSAGE AN 'OPEN-FILE' TO CONTROLLING REQUEST SENT VxD (720), TO THE OS "READY TO OS KERNEL DECRYPT NEXT **GOTO 712** FILE IF ANY" = ~711~ ~731~ IF THÈRE IS A **NEXT FILE TO** IF DECRYPTION BE DECRYPTED IS DEEMED WAITING ON **NECESSARY** THE CONTROL ADD NAME OF COMMAND TO-BE DECRYPTED QUEUE, WAIT FOR FILE TO CONTROL REMOVE IT **NEXT JOB** COMMAND QUEUE FROM WITH DECRYPT COMMAND COMMAND. ~732~ QUEUE& ~712~ SEND JOB TO DECRYPTING TEST AGENT (730) DECRYPT-BUSY FLAG, IF TRUE: SET DECRYPT\_ ELSE, WAIT FOR WAITING DECRYPT FLAG AND WAIT FOR DECRYPT-BUSY **SEMAPHORE SEMAPHORE** FROM EVENTS FROM 719 VxD(710) **ELSE: CONTINUE** ~722~ ~713~ POST DECRYPT WAKE UP ON SEMAPHORE RECEIPT OF ~714~ **SEMAPHORE** ~724~ **FROM** TO TO **FROM** 737 736a 725

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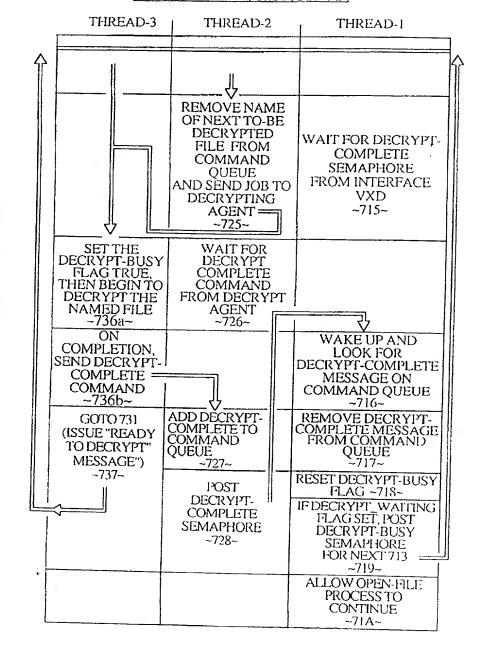
719

بالد ال

6B

#### FIGURE 78

### MULTI-THREADED FLOWCHART FOR RECRYPTION PROCESS (CONT'D)



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